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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,706	01/09/2004	Young-Min Shin	8021-168 (SS-17883-US)	6305
22150 7590 02/08/2008 F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			EXAMINER FLORES, LEON	
			ART UNIT 2611	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/675,706	Applicant(s) SHIN, YOUNG-MIN	
	Examiner Leon Flores	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Response to Remarks***

Applicant asserts that, *"The '040 to Jarvis is generally directed towards a method of coordinating the timers of two processors. The method of Jarvis detects and coordinates the timers of two networked processors by increasing the lesser of two timer values to match the greater value. Each of Jarvis' two processor circuits requires its own circuit to detect timer values, even though just the one that sees a lesser timer value takes action. That is, each of Jarvis' circuits is a "master" and neither is a "slave"."*

The examiner respectfully disagrees. In col. 3, line 47 - col. 4, line 44 the reference of Jarvis discloses a synchronization process between the master circuit and a slave circuit. Furthermore, the examiner does not comprehend what the applicant is trying to contemplate with "040".

Applicant further asserts that, *"Jarvis lacks "a slave circuit" as recited in Claim 1. Further, the method of Jarvis fails to teach or suggest "detects a delay between the output clock signal and the input clock signal, and loads and unloads the input data in response to a variable initialization parameter corresponding to the detected delay"."*

The examiner agrees. However, the examiner has issued a new ground of rejection in order to substantiate for this new limitation, as amended by applicant.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims (1-2) are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin Eibin. (hereinafter Shin) (JP2001/051944) in view of Jarvis.(US Patent 5,918,040)**

Re claim 1, Shin discloses a digital system comprising: a slave circuit in signal communication with the master circuit, receives the output clock signal and the output data, and sends to the master circuit an input clock signal as a feedback signal of the output clock signal and input data that is synchronized with the input clock signal. (See fig. 1 & paragraph 3)

But the reference of Shin fails to explicitly teach that wherein the circuit to detect clock delay generates the reset control signal in response to the system reset signal or an internal reset signal, detects a delay between the output clock signal and the input

clock signal, and loads and unloads the input data in response to a variable initialization parameter corresponding to the detected delay.

However, the reference of Shin does teach that wherein the circuit to detect clock delay generates the reset control signal in response to the system reset signal or an internal reset signal (See fig. 7 & paragraph 16), detects a delay between the output clock signal and the input clock signal (See fig. 7 & paragraph 16), and loads and unloads the input data in response to a variable initialization parameter corresponding to the detected delay. (See figs 6 & 7 & paragraph 16)

Therefore, it would have been obvious to one of ordinary skills in the art to incorporate this feature into the system of Shin, in the manner as claimed, for the benefit of achieving synchronization.

The reference of Shin discloses the limitation as claimed above, except he fails to explicitly teach a master circuit, which includes a circuit to detect clock delay, receives a system reset signal, and generates output data, an output clock signal with which the output data is synchronized, and a reset control signal which responds to the system reset signal; and where the slave circuit is reset in response to the reset control signal.

However, Jarvis does. (See fig. 2 & col. 3, line – col.4, line 44) Jarvis discloses a synchronization process between a master circuit and a slave circuit.

Taking the combined teachings of Shin and Jarvis as a whole, it would have been obvious to one of ordinary skills in the art to incorporate these features into the system of Shin, in the manner as claimed and as taught by Jarvis, for the benefit of

achieving synchronization.

Re claim 2, the combination of Shin and Jarvis further teaches that wherein the internal reset signal is a clock signal generated when detected delays are not identical to one another. (In Shin, see fig. 7: 198 & paragraph 16-19)

**5. Claims (3, 5-6, 10, 12-13, 18, 20) are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin Eibin. (hereinafter Shin) (JP2001/051944)**

Re claim 12, Shin discloses a method of detecting clock delay comprising: detecting a delay between an output clock signal and an input clock signal and automatically generating a variable initialization parameter corresponding to the detected delay if the detected delays are identical to one another (See fig. 6: 150 & 180 & paragraph 15 & fig. 7 & paragraph 16); continuously detecting the delay until the detected delays are identical to one another (See fig. 7 & paragraph 16); and loading and unloading input data in response to the automatically generated variable initialization parameter. (See fig. 6: 150 & fig. 7 & paragraph 16)

But the reference of Shin fails to explicitly teach generating a reset control signal in response to the system reset signal or the internal reset signal, if the detected delays are not identical to one another.

However, the reference of Shin does teach a control unit which reset the clock generation machine and the detecting unit when all the detected delay is not in agreement. (See fig. 7: 198 & paragraph 16)

Therefore, it would have been obvious to one of ordinary skills in the art to incorporate this feature into the system of Shin, in the manner as claimed, for the benefit of resetting the clock generation machine and the detecting unit.

Re claim 13, the reference of Shin further discloses that wherein step (a) further comprises: detecting and outputting a delay between the output clock signal and the input clock signal (See fig. 6: 180 & paragraph 15-16); respectively latching most significant bits and least significant bits of the delays outputted in step (a1) (See fig. 7 & paragraph 18); and comparing the most significant bits and the least significant bits outputted in step (a2), outputting one of the most significant bits and one of the least significant bits as the initial parameters, and outputting a first signal at a first level if all most significant bits and least significant bits are respectively identical to one another, or outputting the first signal at a second level if all most significant bits and least significant bits are not respectively identical to one another. (See fig. 7 & paragraphs 16-19)

Re claim 18, the reference of Shin further discloses that wherein the internal reset signal is generated when the detected delays are not identical to one another. (See fig. 7: the output of element 196 & paragraphs 16-19)

Claim 3 is a system claim corresponding to method claim 12. Hence, the steps in method claim 12 would have necessitated the elements in system claim 3 as claimed. Therefore, claim 2 has been analyzed and rejected w/r to claim 12 above.

Claim 5 is a system claim corresponding to method claim 12. Hence, the steps in method claim 12 would have necessitated the elements in system claim 5 as claimed. Therefore, claim 5 has been analyzed and rejected w/r to claim 12 above.

Claim 6 is a system claim corresponding to method claim 13. Hence, the steps in method claim 13 would have necessitated the elements in system claim 6 as claimed. Therefore, claim 6 has been analyzed and rejected w/r to claim 13 above.

Claim 10 is a system claim corresponding to method claim 18. Hence, the steps in method claim 18 would have necessitated the elements in system claim 10 as claimed. Therefore, claim 10 has been analyzed and rejected w/r to claim 18 above.

Claim 20 is a system claim corresponding to method claim 12. Hence, the steps in method claim 12 would have necessitated the elements in system claim 20 as claimed. Therefore, claim 20 has been analyzed and rejected w/r to claim 12 above.



**6. Claims (4 & 14) are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin Eibin. (hereinafter Shin) (JP2001/051944)**

Re claim 14, the reference of Shin fails to explicitly teach that wherein step (b) is characterized by generating the reset control signal for resuming step (a) in response to the first signal if one of the detected delays is not identical to other detected delays and resuming step (a) by N-bit free running until the detected delays are identical to one another.

However, the reference of Shin does teach a control unit which reset the clock generation machine and the detecting unit when all the detected delay is not in agreement. (See fig. 7 & paragraphs 16-19)

Therefore, it would have been obvious to one of ordinary skills in the art to incorporate this feature into the system of Shin, in the manner as claimed, for the benefit of resetting the clock generation machine and the detecting unit.

Claim 4 is a system claim corresponding to method claims 13 & 14. Hence, the steps in method claims 13 & 14 would have necessitated the elements in system claim 3 as claimed. Therefore, claim 4 has been analyzed and rejected w/r to claims 13 & 14 above.

**7. Claims (7 & 15) are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin Eibin. (hereinafter Shin) (JP2001/051944)**

Re claim 15, the reference of Shin further discloses that wherein step (b) further comprises: (b1) generating an internal reset signal in response to the first signal and a predetermined clock signal (See fig. 7: the output of element 196 & paragraphs 16-19); and (b3) performing N-bit free running in response to the first signal and generating an N-bit free running signal. (See fig. 7: 197 & paragraphs 16-19)

But the reference of Shin fails to explicitly teach (b2) receiving the system reset signal or the internal reset signal, and generating the reset control signal.

However, the reference of Shin does teach a control unit which reset the clock generation machine and the detecting unit when all the detected delay is not in agreement. (See fig. 7 & paragraphs 16-19)

Therefore, it would have been obvious to one of ordinary skills in the art to incorporate this feature into the system of Shin, in the manner as claimed, for the benefit of resetting the clock generation machine and the detecting unit.

Claim 7 is a system claim corresponding to method claim 15. Hence, the steps in method claim 15 would have necessitated the elements in system claim 7 as claimed. Therefore, claim 7 has been analyzed and rejected w/r to claim 15 above.

**8. Claims (8 & 16) are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin Eibin. (hereinafter Shin) (JP2001/051944) in view of Jarvis.(US Patent 5,918,040)**

Re claim 16, the reference of Shin further discloses that wherein step (c) further comprises: (c1) generating the clock signal (See fig. 7: 110 & paragraph 16); (c3) receiving and controlling the clock signal, and outputting the controlled clock signal; (c4) receiving the controlled clock signal, and generating load control signals and unload control signals in response to the initial parameter (See fig. 6: the output of element 150 & paragraph 15); and (c5) receiving input data inputted from the slave circuit, and unloading the input data in response to the load control signals and the unload control signals. (See fig. 6: the output of element 150 & paragraph 15)

But the reference of Shin fails to explicitly teach (c2) outputting the output clock signal to a slave circuit in response to the clock signal.

However, Jarvis does. (See fig. 2 & col. 3, line – col.4, line 44) Jarvis discloses a synchronization process between a master circuit and a slave circuit.

Taking the combined teachings of Shin and Jarvis as a whole, it would have been obvious to one of ordinary skills in the art to incorporate these features into the system of Shin, in the manner as claimed and as taught by Jarvis, for the benefit of achieving synchronization.

Claim 8 is a system claim corresponding to method claim 16. Hence, the steps in method claim 16 would have necessitated the elements in system claim 8 as claimed. Therefore, claim 8 has been analyzed and rejected w/r to claim 16 above.

**9. Claims (9 & 17) are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin Eibin. (hereinafter Shin) (JP2001/051944)**

Re claim 17, the reference of Shin fails to explicitly teach that wherein the output clock signal is outputted from a predetermined master circuit, the input clock signal is outputted from a predetermined slave circuit, and the input clock signal is a feedback clock of the output clock signal.

However, in another embodiment, the reference of Shin does teach that the output clock signal is outputted from a predetermined master circuit, the input clock signal is outputted from a predetermined slave circuit, and the input clock signal is a feedback clock of the output clock signal. (See fig. 1 & paragraph 3)

Therefore, it would have been obvious to one of ordinary skills in the art to incorporate this feature into the system of Shin, in the manner as claimed, for the benefit of achieving synchronization between two transceivers.

Claim 9 is a system claim corresponding to method claim 17. Hence, the steps in method claim 17 would have necessitated the elements in system claim 9 as claimed. Therefore, claim 9 has been analyzed and rejected w/r to claim 17 above.

**10. Claims (11 & 19) are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin Eibin. (hereinafter Shin) (JP2001/051944)**

Re claim 19, the reference of Shin fails to explicitly teach that wherein the reset control signal is generated when the system reset signal or the internal reset signal is activated.

However, the reference of Shin does teach a control unit which reset the clock generation machine and the detecting unit when all the detected delay is not in agreement. (See fig. 7 & paragraphs 16-19)

Therefore, it would have been obvious to one of ordinary skills in the art to incorporate this feature into the system of Shin, in the manner as claimed, for the benefit of resetting the clock generation machine and the detecting unit.

Claim 11 is a system claim corresponding to method claim 19. Hence, the steps in method claim 19 would have necessitated the elements in system claim 11 as claimed. Therefore, claim 11 has been analyzed and rejected w/r to claim 19 above.


**Contact**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Flores whose telephone number is 571-270-1201. The examiner can normally be reached on Mon-Fri 7-5pm Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LF  
January 22, 2008

  
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SUPERVISORY PATENT EXAMINER